

Metropolitan King County Council

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MEMORANDUM

DATE: March 12, 2002

TO: Metropolitan King County Councilmembers

FROM: Cheryle A. Broom, County Auditor

SUBJECT: Performance Audit – Residential Property Assessments, Department of Assessments

Attached for your review is the Performance Audit of Residential Assessments, Department of Assessments. This audit was prompted by council concerns over the fairness and accuracy of residential assessments made by the County Assessor's Office. There was also interest in whether adjustment of property values ordered by the Board of Appeals and Equalization were made in a timely manner.

The purpose of this audit was to evaluate the process by which the Department of Assessments conducts residential assessments in compliance with industry standards and produces assessments that reflect true and fair market value. We also reviewed how Board-adjusted property values are implemented. This study did not attempt to examine the assessment of the value of commercial property or personal property.

The audit concluded that residential property assessments by the department complied with industry standards promulgated by an international professional organization, the International Association of Assessing Officers (IAAO). The IAAO standards test whether the assessments are uniform and equitable. When we looked at a sample of residential assessments by neighborhood (area), we found that the Department of Assessments met those statistical standards. Compared to other counties in the state of Washington, King County met or exceeded the statewide averages for the standards.

When we reviewed the access the public has to information about assessments, we found that information available on county agency web sites was not well linked or consistently current. We recommend better coordination of this information to make it easier for the property owner to find.

While the aggregate performance assessments meet industry standards, there is no guarantee that every individual assessment is accurate. For those exceptions, property owners may appeal to the county's Board of Appeals and Equalization.

We reviewed how adjustments to assessed valuations ordered by the Board of Appeals were implemented. We found that there were delays in entering new data into the Department of Assessment's database and recommend that the process be streamlined.

We also found delays in the processing of tax refunds to property owners who won their appeals, and we recommend that the Finance and Business Operations Division set a performance target to reduce the amount of time it takes to process the refunds.

The County Assessor and the Executive concur with the recommendations.

The audit team wishes to express its appreciation for the cooperation and courtesy extended to us by staff of the Department of Assessments, the Board of Appeals and Equalization, the Tax Advisor's Office, and the Finance and Business Operations Division.

CB:RP:jl:areport.doc

PERFORMANCE AUDIT

**RESIDENTIAL PROPERTY
ASSESSMENTS**

DEPARTMENT OF ASSESSMENTS



Presented to
the Metropolitan King County Council
by the
County Auditor's Office

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Report No. 2002-01

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Abbreviations

AV	Assessed Value Ratio
BAE	Board of Appeals and Equalization
DDES	Department of Development and Environmental Services
DOA	Department of Assessments
IAAO	International Association of Assessing Officers
KCC	King County Code
RCW	Revised Code of Washington

REPORT SUMMARY

Scope

This performance audit of residential property assessments by the County Assessor's Office (Department of Assessments) arose out of council concerns over whether residential assessments were representative of market values and developed in a manner consistent with industry or professional standards. There was also concern over the timeliness with which adjusted values ordered by the county Board of Appeals and Equalization (BAE or the Board) were implemented.

Objectives

This audit reviewed and evaluated the process used by the Assessor's Office to conduct appraisals of residential properties in the county and compared that to recognized professional practices and standards for public assessments. The audit sought to determine whether the county department met industry standards and whether the assessed values of residential assessments are reflective of true and fair market values.

The audit also reviewed the implementation of adjustments approved by the Board of Appeals and Equalization to determine whether adjustments of assessed values occurred in a timely manner.

Overview

Compliance with laws and professional standards

We found that the Department of Assessments, headed by the County Assessor, performs residential appraisals in a manner which conforms to professional standards for mass appraisals. Based on key indicators of performance, King County meets those standards, and when compared to other counties in Washington State, meets or exceeds the statewide average for those statistical measures.

Access to public information on assessments

The Assessor's Office provides information about the property assessment process through its public information office and its internet site. Complete information about individual properties is available only through the information office, and to a lesser extent, six county community service centers. Assessment data on the department's web site is limited to summarized statistics and excerpts from 88 area (neighborhood) reports. The latter show on a summary basis how assessed values in a neighborhood compare to recent sales in that area, but much of the information is not written for a lay reader such as a taxpayer.

Taxpayers seeking detailed information about individual property parcels have limited access options. They may go to the department's public information office or a community center to query databases and examine maps, area reports, etc.

Access to information via the internet is confusing. As noted above, the department's web site offers primarily summarized information. It does not provide a link to two other county departmental web sites which have more detailed information about parcels characteristics, assessed values, and taxes. The Finance and Business Operations Division's¹ web site enables one to look up current and previous years' tax information, but only if the parcel number is known. The Department of Development and Environmental Services (DDES) provides user-friendly access to parcel and assessment information (updated periodically by the Assessor).

Ironically only one of these sites provides a link to another, and users will have difficulty in finding the information they might need. Also, information about current posted values and taxes

¹ Formerly Department of Finance. Per the reorganization ordinance passed in September 2001, the Department of Finance became the Finance and Business Operations Division under the Department of Executive Services.

for a subsequent year is not available on any site, even after the revaluation and tax notices for next year have been mailed to property owners.

While we suggest that more information be available on the web sites, we do not recommend that it be unlimited. For example, we do not see the need to include the names of property owners, due to concerns expressed by county agencies regarding the potential for abuse of such information.

We recommend in this report that the information on the Assessor's Office web site be made more readable to the lay reader and that more specific information be made available. We further recommend that the information about property, assessed values, and taxes contained on county agency web sites be better coordinated and easier for the public to access.

Implementation of appeal orders

Regarding the implementation of appeals ordered by the Board of Appeals and Equalization, we found that the Assessor's Office properly implements the adjusted values, but that the recording of the new values may be duplicative and slow, resulting, in some cases, in the delay of property tax refunds. A recommendation is made for the Assessor's Office to streamline this process.

We further found that it took several weeks for the Finance and Business Operations Division (Finance Division) to process tax refunds. We recommend that the division reduce the processing time and establish a performance target for that process.

SUMMARY OF FINDINGS AND RECOMMENDATIONS

Background

The county is charged under law to assess real property at true and fair value, which equates to market price/value. Each year 85 full-time equivalent staff make assessments of over 460,000 parcels of residential properties, using an approach called “mass appraisal.” This technique uses a combination of statistical calculations and physical characteristics of the property to determine the new assessment values each year. The mass appraisal process is governed by standards developed by the International Association of Assessing Officers. The audit team employed those standards to assess the performance of how well the County Assessor’s Office develops assessment values that are both equitable and uniform.

**Mass Appraisal
Performance in King
County**

The assessments produced by the County Assessor’s Office meet legal requirements and industry standards. The audit team verified the accuracy of the performance data published by the Assessor’s Office and used to measure the overall quality and performance of its methods and statistical models.

As noted above, assessments are required by law to reflect true and fair value. The principal way to measure this is the comparison of assessed value to sale price, expressed as a ratio. The ideal assessed value ratio is 1.0. Also, the International Association of Assessing Officers develops standards to evaluate and ensure the performance and quality of mass appraisal assessments. The residential assessments produced annually by the King County Assessor’s Office meet the statutory requirements and all of the applicable standards. (Finding 2-1)

**Access to Public
Information About
Assessments**

There are several ways for county taxpayers to access information about residential property assessments, but only one of them provides complete information. Namely, the Department of Assessment's Public Information Office on the 7th floor of the County Administration Building provides hard copy and computer records on all aspects of a property. To a lesser degree, taxpayers can access assessment data at county community service centers, on the department's web site, and on the web sites of two other county agencies.

Internet versions of reports about assessments by neighborhood (called "area reports") are not written for the lay reader and omit key data such as recent sales data (with addresses). (Finding 3-1) We recommend including sales data in the report summaries and making them more readable for the general public. (Recommendation 3-1)

The web sites of three county agencies provide different pieces of information about assessments, taxes, and property parcels available to the public. However, there is no overall coordination and linking of the sites, and some of the information is not current. (Finding 3-2) We recommend that the data provided be more timely and that agencies improve the coordination and content of their sites. (Recommendation 3-2)

**Implementation of
Board of Appeals and
Equalization Orders**

Taxpayers who believe that their residential property valuation is inaccurate may file an appeal petition to the county Board of Appeals and Equalization.

Pursuant to council concerns, the audit team reviewed how assessed valuation appeals are implemented, if it is determined that some form of adjustment to the value originally established by the Assessor's Office is appropriate.

We followed a sample of appeals through the appeals process and examined how adjustments by the Board or the Department of Assessments are implemented. We found that the Assessor's Office properly implements Board orders (Finding 4-1), but that the recording/entry of the adjusted values into databases was duplicative and slow (Finding 4-2). In our sample, about half of the cases took over 30 calendar days to record the Board's changes to assessed values in Assessor's system. This can cause further delay in the processing and delivery of tax refunds.

We recommend that Board-ordered adjusted values be entered into the Department of Assessment's database records on a more timely basis, particularly when it pertains to a tax refund.

We further found that the processing of tax refunds by the Finance Division often took several weeks. (Finding 4-3) It took more than 40 calendar days for the Finance Division to process 75 percent of the tax refund applications in our sample for year 2000. We recommend the division establish a performance measure to reduce the turnaround time for tax refunds.

**Assessor and Executive
Responses**

The Department of Assessments and the County Executive concur with the recommendations in the audit. Their responses are included in Appendices 2 and 3.

AUDITOR'S MANDATE

The King County Department of Assessments Residential Property Assessments were reviewed by the County Auditor's Office pursuant to Section 250 of the King County Home Rule Charter and Chapter 2.20 of the King County Code. The audit was performed in accordance with generally accepted government auditing standards, with the exception of an external quality control review.

1 INTRODUCTION

Background

This audit came from questions raised by the Metropolitan King County Council over whether residential property assessments were representative of true and fair market values and developed in a manner consistent with industry or professional standards. There was also concern over the timeliness with which adjusted values ordered by the county Board of Appeals and Equalization were implemented.

A. Methodology

We first examined the legal framework that requires counties in the state of Washington to conduct property assessments. We then looked at how the King County Assessor's Office (Department of Assessments) conducts residential property appraisals and how the performance of the appraisals conforms to industry standards.

We analyzed the assessments in a random sample of neighborhoods in the county, in order to verify the statistical measures reported by the Assessor's Office for those areas and to compare the results of the Assessor's statistical models with standards recommended by an international professional assessment organization.

In addition, we tracked a sample of residential property appeals to determine whether adjustments to property values ordered by the county Board of Appeals and Equalization occurred in a timely manner.

The county is charged under law to assess real property at true and fair value, which equates to market price/value. Each year 85 full-time equivalent staff make assessments of over 460,000

parcels of residential properties, using an approach called “mass appraisal.” This technique uses a combination of statistical calculations and physical characteristics of the property to determine the new assessment values each year. The mass appraisal process is governed by standards developed by the International Association of Assessing Officers (IAAO). Those standards can be used to assess the performance of how well the county assessor develops assessment values that are both equitable and uniform.

B. Statutory/Legal Framework

In the state of Washington, county assessors are charged with the responsibility of assessing the value of real and personal property, for the purpose of collecting tax revenue. This audit focuses on only one portion of assessments, i.e., those conducted on residential real property.

The mandate for the assessment of real property comes from the state constitution, state law, and county ordinance. Article VII of the Washington State Constitution provides for a uniform tax on property at true and fair value, and gives the state legislature authority to make exemptions (e.g., for retired persons). Article XI vests the counties with authority to assess and collect taxes.

State law establishes county assessors, and sets standards and qualifications for persons assessing real property, and it requires annual reports by the county assessors to the state Department of Revenue (RCW Chapter 36.21, particularly RCW 36.21.015 and .100). The state also requires an annual assessment of all real property (RCW 84.40.020), and that all real property be appraised at one hundred percent of its true and fair value, based on similar sales, cost, value of land, and the value of the structure (RCW 84.40.030). “True and fair value” is commonly equated with “market value” or “market price” by assessors and

appraisers.² State statute further provides for an appeals process, establishing county boards of equalization (RCW 84.48.010).

In King County, the County Assessor is an elected official who heads the Department of Assessments. King County Code (KCC 2.16.210) identifies the Department of Assessments and prescribes its primary duty as the establishment of the value of property subject to *ad valorem* taxation.³ Taxpayers who disagree with the assessed value of their property have 60 days to file an appeal. The composition and duties of the county Board of Appeals and Equalization (BAE) is set forth in KCC 2.34.

C. Budget

As shown in the Exhibit A table below, the annual budget of the Department of Assessments is approximately \$16 million. Of that amount, just about \$5 million (or 30 percent of the total budget) support the residential property appraisal functions. The budget supports 242.7 full-time equivalent positions for 2001 and 2002, two fewer than in 2000. Eighty-five full-time equivalent staff conduct residential appraisals, and they are supervised by the Residential Division Manager. There has been considerable turnover in the last few years, mostly due to retirements. Approximately half the residential property assessors' positions have changed in that time.

² Joseph K. Eckert (ed.), *Property Appraisal and Assessment Administration*, The International Association of Assessing Officers, 1990, p. 87.

³ *Ad valorem* tax is one levied in proportion to the value of the item being taxed, i.e., property. The property tax is an *ad valorem* tax. *Ibid.*, p. 632.

EXHIBIT A
Department of Assessment Budget
2000 - 2002

	2000	2001 (budgeted)	2002 (budgeted)
Department Total	\$14,454,741	\$16,295,584*	\$16,251,428
Residential Appraisal**	\$4,346,976	\$4,797,643	\$5,105,029

*Includes a 2001 supplemental appropriation of \$330,852.

**Does *not* include administrative support, information services, GIS support, senior citizen support, or public information.

Source: ARMS reports and King County Budgets

For 2001 the Department of Assessments was responsible for assessing real and personal property in the amount of \$173,771,097,680. Single family residential property values represent \$108,642,181,837 or 63 percent of that total.⁴

D. Overview of Assessment Process

Each year the County Assessor's Office provides a new assessed value for each of the 460,000-plus parcels of residential real estate in King County. The Department of Assessments uses a process called "mass appraisal" to calculate the new values. Subsequent to that, each residential property owner receives a "valuation change notice" postcard that shows both the old (current year's) and new (next year's) assessed values of the land and the structure on it, if there is one.

Finance Division issues tax statements to property owners and collects the tax payments. The tax statement itemizes taxes on the property based on state and local taxes and the rate of taxes levied by governmental units (such as school districts, sewer districts, and fire districts). Both the assessed value of the property and the applicable tax rates affect the total tax obligation.

⁴ *Annual Report for 2001*, King County Assessor. Multiple Family Residential Values amounted to \$22,785,056,000.

Residential property owners have a 60-day period in which they may submit a petition to the County Board of Appeals and Equalization appealing the new assessed value. A complete description of the appeals process is discussed later in Chapter 4 of this report.

E. The “Mass Appraisal” Approach

Because of the scale of its responsibility to annually assess all properties, the King County Assessor’s Office utilizes a “mass appraisal” approach. This means that it uses a recognized methodology to produce new assessment values on a large scale. An international assessment association issues standards of practice and performance which are recognized throughout the public appraisal community.

Mass appraisal is defined as “the systematic appraisal of groups of properties as of a given date using standardized procedures and statistical testing.”⁵ It differs from single-property appraisals conducted by a private appraiser, for example, for loan qualification.

Most counties in the state of Washington use the mass appraisal approach. The Washington State Association of County Assessors, which represents all county assessors in this state, is affiliated with the IAAO and promotes adherence to the association’s professional standards.

The IAAO is an international organization which develops extensive professional standards, textbooks, and training for public entities responsible for assessing the value of property.

The premise behind the mass appraisal approach as developed by the IAAO is that public entities, such as assessors’ offices charged with conducting assessments on a large scale, can utilize various statistical techniques and models to derive

⁵ Eckert, p. 303.

assessed values that are equitable and fair. In other words, those values reflect market values as closely as possible.

F. Mass Appraisal in King County: Physical Inspections and Annual Updates

The King County Assessor's Office periodically submits a long range plan (called a "revaluation plan") to the state Department of Revenue indicating when and how it will reassess properties over a six-year period. It divides the county into 88 areas or neighborhoods, and proposes to make new assessments annually for each area through one of two methods: a physical inspection or an annual update (see explanation below).

Physical inspections are planned for each area every six years. In other years, an annual update occurs. Summaries of the analyses for each area are available on the Department of Assessment's web site.

Physical Inspection

The physical inspection process establishes baseline data and assessed values for a neighborhood. In a physical inspection, a team of assessors reviews property characteristics, permit information and other data before visiting an area, and then the team externally views all the residential properties. It also validates variables or characteristics that affect value, such as waterfront location and traffic noise, and then tests their validity against actual sales in the area (using statistical models). These calculations then lead to the development of new assessed values. Various statistical tests (see Appendix 1) are performed to ensure that the new values are equitable and uniform.

Annual Update

For the five years subsequent to a physical inspection, assessed values are adjusted through a process called an annual update. An annual update involves the use of complex statistical models to adjust the previous year's assessed values of residential properties. The process uses the physical inspection baseline

data as a starting point, and then makes changes based primarily on property characteristics and on sales in that area within the previous 20 to 24 months. The same statistical tests for equity and uniformity that were used in the physical inspections are employed to assure the quality of the results of the annual updates.⁶

G. Performance, Standards, and Quality Assurance

The purpose of the mass appraisal is to assess a large number of properties in a way that produces assessments that are as close as possible to market value. There are a number of ways to measure the performance of this process and the quality of the product.

The first and primary indicator of performance is the ratio of assessed values to sale prices. Because sale prices reflect market values, the assumption is that the goal of mass appraisals is to produce assessed values which approximate prevailing sale prices as closely as possible. The ideal ratio of assessed value to sale prices is 1.0. In King County, the assessed value (AV) ratio is typically 0.93 or 0.94 for residential property.

Standards of the IAAO also require that mass appraisals meet certain statistical tests for uniformity and reliability. They help to ensure that properties of differing values are assessed fairly and consistently.

⁶ King County Assessor's Office, *Annual Update for 1999 Residential Assessments*, Residential Appraisal Division, January 1999, p. 4.

Level of Assessment

For residential properties, the IAAO standard requires that the AV ratio be between 0.90 and 1.10.⁷ King County and 31 other Washington counties meet that standard.⁸

Uniformity of Assessments

The IAAO standard suggests that median AV ratios for residential properties be within five percent of the median ratio for all properties. King and 34 other counties meet that standard.

The IAAO also promulgates standards for statistical tests intended to ensure there is vertical and horizontal equity in assessed values. In other words, these tests seek to measure whether there is uniformity in the assessment among properties in the same and other areas.⁹ When viewed against these standards, King County meets or exceeds the statewide average.¹⁰

⁷ *Standard on Ratio Studies*, International Association of Assessing Officers, July 1999, p. 34.

⁸ Five counties do not meet the standard, and one does not distinguish between residential and non-residential data. House of Representatives, Office of Program Research, *Measuring Real Property Appraisal Performance in Washington's Property Tax System, 2000*, August 17, 2001, p. 3.

⁹ These measurements are called coefficient of dispersion and price-related differential (PRD). For an explanation of these terms, see Appendix 1.

¹⁰ *Measuring Real Property Appraisal Performance in Washington's Property Tax System 2000*, pp. 20, 21, and 28. The standard for coefficient of dispersion is 15 for residential property. King County's coefficient of dispersion is 11, and the statewide average is 13. The PRD should be between 0.98 and 1.03, and King County's is 1.03, the same as the statewide average. See also IAAO Standard, p. 34.

2 MASS APPRAISAL PERFORMANCE IN KING COUNTY

Overview

The assessments produced by the County Assessor's Office meet legal requirements and industry standards. The audit team verified the accuracy of the performance data published by the Assessor's Office and used to measure the overall quality and performance of its methods and statistical models.

The models and statistical tests used to revalue property appear to address the key performance questions and concerns. For example, does the assessor's model/method ensure all properties are assessed equitably and fairly?

As explained in the previous chapter of this report, assessments are required by law to reflect true and fair value. The principal way to measure this is the proximity of the assessed value ratio to 1.0. Also, the IAAO develops standards to evaluate and ensure the performance and quality of mass appraisal assessments. The residential assessments produced by the King County Assessor's Office meet the statutory requirements and all of the applicable industry standards.

FINDING 2-1

THE KING COUNTY ASSESSOR'S OFFICE MEETS STATUTORY REQUIREMENTS AS WELL AS THE INDUSTRY STANDARDS FOR MASS APPRAISALS DEVELOPED BY THE IAAO.

Statutory Requirements

As discussed below, King County's AV ratio in 2000 was 0.93, slightly higher than the state average. This is close to the ideal ratio value of 1.0 and within the range required by professional assessment standards. By producing residential assessments

that are close to sale prices, the Assessor's Office meets the statutory requirement that the assessments reflect true and fair value.

Industry Standards

When appraisals are conducted on a mass versus an individual basis, there is a need to ensure that there is equity and uniformity among the assessments. The IAAO has developed standards with which to measure the quality of assessments and the performance of the approach used.

Level of Assessment

Ratio studies evaluate the overall equity level of assessments. For residential property, the ideal ratio of AV to sale price is 1.0:1.0, and the IAAO standard requires the ratio to fall between 0.90 and 1.10. The state's Department of Revenue collects AV ratio data from all of the 39 counties in Washington as a way of measuring equity of property assessments statewide. Also, the Washington State House of Representatives' Office of Program Research publishes an annual report, *Measuring Real Property Appraisal Performance in Washington's Property Tax System*. The study evaluates the appraisal performance in two general areas: level of assessment and uniformity of assessments.

According to a state report, for 2000, King County's residential median assessment ratio was 0.93, and the statewide average was 0.92. By comparison, Snohomish County's ratio was 0.83, Kitsap County's was 0.91, and Pierce County's was 0.92.¹¹

Uniformity of Assessments

Statistical tests are performed as well to determine whether the ratio of assessed values to sale price is uniform both within a neighborhood (vertically) and among different neighborhoods (horizontally). The IAAO promulgates standards for statistical

¹¹ House of Representatives, Office of Program Research, *Measuring Real Property Appraisal Performance in Washington's Property Tax System*, 2000, August 17, 2001, p. 8.

tests intended to ensure there is vertical and horizontal equity in assessed values. Although some counties overall meet these standards, King County meets or exceeds the statewide average.¹²

King County's ratio for residential property is only 0.6 percent different from the countywide median.¹³ When ranked by sales value quartiles, King County's AV ratios are uniform, except for the upper quartile (the highest 25 percent of assessed values), in which the ratio is slightly lower.¹⁴

Limitations to Statistical Process

The mass appraisal process, as developed and standardized by the IAAO and as described in the audit, is one which relies heavily on statistical tests to ensure the reliability of the performance of the assessor's valuation (regression) models and their calibration. These statistical tools are the "scientific" part of the "art" of appraising, but they are not absolutely accurate for every individual property in a given area. Nor are they intended to be. A 95 percent confidence level in the derivation of assessed values indicates that there is room for the possibility that some properties may not fit the model as well as almost all the others within it.

¹² Ibid., pp. 20, 21, and 28. The standard for coefficient of dispersion is 15 for residential property. King County's coefficient of dispersion is 11, and the statewide average is 13. The price-related differential (PRD) should be between 0.98 and 1.03, and King County's is 1.03, the same as the statewide average. See also IAAO Standard, p. 34.

¹³ Ibid., p. 11.

¹⁴ Ibid., p. 24.

Although the goal of the mass appraisal process is to provide a true and fair value for residential property, achieving perfect equity between assessed values and sale prices for all properties is neither likely nor realistic. Also, other indicators of model performance, such as the assessed value ratio, the coefficient of dispersion, and the price-related differential (see Appendix 1) meet IAAO standards.

FINDING 2-2**THE ACCURACY OF AV RATIOS AND STATISTICAL MEASURES FOR SELECTED KING COUNTY NEIGHBORHOODS WAS VERIFIED BY THE AUDITOR.****Auditor's Sample**

As noted above, the values resulting from mass appraisals may be compared to IAAO standards to assess the performance of the appraisal process. The Assessor's Office uses complex statistical models and property characteristics to derive the assessed values for individual parcels.

To test the validity of the results of the mass appraisal approach employed in King County, the audit team randomly selected ten neighborhoods for analysis, two from each of the county's five assessment regions. Five came from areas where the new assessments were derived by the physical inspection process, and the other five came from areas that received annual updates.¹⁵

The area summaries each include a table that contains the area's values for the various statistical measures of equity and uniformity. (Appendix 1 contains explanations of these measures.) They include:

¹⁵ The physical inspection areas were Woodinville/Paradise Lake, Inglewood/Juanita, Newport/Kennydale, Woodmont/Redondo, and the Central Area. The annual update areas were North Sammamish, Central Shoreline, Eastgate/Factoria, Auburn, and Queen Anne.

- Mean assessed value and sale price; standard deviations for each
- Assessment level (to show the relation between assessed value and sale price):
 - ✓ Arithmetic and weighted mean assessed value ratios
- Uniformity (to show that properties are valued with consistency, irrespective of neighborhood and price):
 - ✓ Coefficient of dispersion
 - ✓ Price-related differential
- Reliability (to show the margin of error):
 - ✓ Mean and median confidence levels
- Normality of distribution: binomial test (to indicate whether further testing or adjustment of the model might be necessary)

The audit team was able to verify these values in a subset of our sample. In each case, the numbers independently calculated by the audit team equaled those reported by the Department of Assessments, thus confirming their validity.

Practices in Other Counties

Other counties in the state of Washington generally employ similar methods to conduct residential assessments. However, about half the counties (20) use a four-year revaluation cycle, whereas King and 16 other counties use an annual cycle.¹⁶ As noted above, in terms of performance, King County's AV ratio, coefficient of dispersion, and price-related differential are equal to or slightly better than the statewide averages.

¹⁶House of Representatives, Office of Program Research, *Measuring Real Property Appraisal Performance in Washington's Property Tax System, 2000*, August 17, 2001, p. 31. Douglas County uses a 2-year cycle, San Juan County a 3-year cycle.

In this state, there is the Washington State Association of County Assessors, with representation from all 39 counties. The association promotes uniform assessment practices and policies, assessor training, and it is affiliated with the IAAO. All association members are encouraged to become members of the IAAO.¹⁷

¹⁷ Constitution and Bylaws of the Washington State Association of County Assessors, Article II and Appendix A.

3 ACCESS TO PUBLIC INFORMATION ABOUT ASSESSMENTS

Background

There are several ways for county taxpayers to access information about residential property assessments, but only one of them provides complete information. Namely, the Department of Assessment's Public Information Office on the 7th floor of the King County Administration Building provides hard copy and computer records on all aspects of a property. To a lesser degree, taxpayers can access assessment data by mail, at county community service centers, on the department's web site, and on the web sites of two other county agencies.

Internet versions of reports about assessments by neighborhood (called "area reports") are not written for the lay reader and omit key data such as recent sales data with addresses. We recommend including sales data in the report summaries and making them more readable for the general public.

The web sites of three county agencies provide different pieces of information about assessments, taxes, and property parcels available to the public. However, there is no overall coordination and linking of the sites, and some of the information is not current. Agencies have told us that they are in the process of updating and linking their web sites. We recommend that the data provided be more current and that agencies improve the coordination and content of their sites.

Overview

Considering that there are over 460,000 residential parcels assessed annually in King County, public/taxpayer interest in accessing assessment information is ongoing. For example, property owners may want to know the basis for their assessment or want to obtain information about property values

for a certain location. Or they may be in the process of filing an appeal.

The Department of Assessment's web site provides general information about and explanations of the assessment process, property valuation notices, tax statements, assessment statistics, and area (neighborhood) summaries (see below).

In addition, the public information office of the Department of Assessments includes eight computer terminals on the 7th floor of the King County Administration Building. With these terminals, an individual can access assessment and tax information on any residential property in the county. This database also includes information about recent comparable residential property sales.

Six county community service centers also have online access to much of the data, including sales information.¹⁸

Taxpayer Assistance

The Department of Assessments operates a public information office on the 7th floor of the King County Administration Building. There taxpayers can use computer terminals, maps, area reports and other sources to get information about properties, assessments, and property tax amounts. Staff of the department also responds to questions and help people to access the information they request.

The county also has a Tax Advisor Office. It is part of the Ombudsman Office, an independent agency of the Metropolitan King County Council. The Tax Advisor personnel assist citizens with information about the assessment process, the appeals process, and assessment data on specific properties.

¹⁸ The six locations are: Cottage Lake CSC, Fall City CSC, Lake Wilderness CSC, Northshore CSC, Sammamish CSC, and Vashon Maury Island CSC. (Source: <http://www.metrokc.gov/lars/csc/>)

Tax Advisor staff told us that citizens who contact their office report frustration in accessing information about their specific property valuation, particularly the basis for the assessment, the characteristics of the property used by the Assessor's Office (e.g., square footage, building grade), and comparable sales.

There are different ways in which a citizen can access assessment information. The most direct method is to visit the public information office in the King County Administration Building, because it provides access to all the data affecting an assessment. To a lesser degree, community centers have much of the same information. A limited amount of information is available through the Department of Assessments' web site.

Below we describe in more detail some of the information and how the public may access it.

FINDING 3-1**AREA REPORTS AND EXECUTIVE SUMMARIES ARE TOO TECHNICAL FOR A LAY CITIZEN READER. THE EXECUTIVE SUMMARIES LACK SOME NECESSARY INFORMATION WHICH SHOULD BE INCLUDED.**

An area report explains on how the new assessment values for the following year were derived and how well they conform to assessment standards. Executive Summary Area Reports are excerpted versions of the full report, and are available on the Assessor's web site. However, the complete area summaries are publicly available only in hard copy, in the public information office, and a limited number of sites around the county.

The area reports provide useful information about the change in assessed values from one year to the next. They also contain data showing how well the assessment process in that area conforms to the recognized industry standards discussed

previously. While the reports present information in accordance with industry standards, they do not explain the information in lay terms, how the mass appraisal process works, what key terms mean, or how the indicators of performance meet with industry standards.

Because the Department of Assessments overall does such a good job in meeting industry standards, it should take care to explain to the public how it does so. Also, some public inquiries about the assessments in a neighborhood might be answered if the area reports were geared more for lay readers. Instead, the department provides statistical data on AV ratios and relevant statistical performance measures without explanation.

Also, when the department prepares executive summaries of the area reports, it omits some key information. For example, the executive summaries on the Assessor's web site do not include comparable sales price data for that area, nor do they contain summary information on the pertinent statistical measures of equity and uniformity. By contrast, the full reports contain sales data, although the addresses of the parcels are omitted. Comparable sales data, with the accompanying addresses, would provide taxpayers with a more complete explanation of how their new property values were derived.

Furthermore, some of the technical information about the results of the mass appraisal process could be included in an executive summary so that the performance and quality of the assessments could be disclosed. For example, the summary could explain how equitable and uniform the assessments were, and what sub areas or special characteristics were factored into the analysis (e.g., waterfront, traffic noise, golf course).

We understand that the department intends to upgrade the quality and content of its web site early in 2002.

RECOMMENDATION

- 3-1** We recommend that the Department of Assessments include in its area summaries an explanation of the mass appraisal process, its methods, and its results, written for the lay reader. Moreover, the department should include comparable sales data (with addresses) in the area reports and report summaries.

FINDING 3-2**THREE COUNTY DEPARTMENT WEB SITES PROVIDE INFORMATION ON PROPERTY ASSESSMENTS AND TAXES, BUT THEY ARE NOT COORDINATED WITH EACH OTHER, AND SOME OF THE INFORMATION IS NOT CURRENT.****Other Assessment
Information**

Information about property assessments, taxes, and parcel descriptions may be found on the web sites of three different county departments: the County Assessor, Finance Division of the Department of Executive Services, and the Department of Development and Environmental Services (DDES). In order for property owners to answer basic questions about their individual property values, their levy and payment history, and parcel location, they must access all three web sites. However, not all information is current, the process of obtaining individual parcel numbers is not straightforward and the web sites are not well linked, making it difficult to answer these basic questions via the internet.

As discussed earlier in this report, the Department of Assessments/Assessor's web site provides summary-level property valuation information for each area of the county. However, it does not provide any individual, property-specific information (although for a small fee, the Assessor's Office will send a data file via CD-ROM upon request), either for one's own property or others in the area.

To obtain online information on individual property values, property owners can go to the Finance Division's web site. By entering an individual parcel or a tax identification number, one can obtain up to four years of assessed value and property tax information. Unfortunately, the Finance Division's web site does not provide an on-line means of obtaining the parcel or tax identification numbers. If property owners do not know these numbers, they are instructed to locate their property tax statements or to call the Assessor's Office for assistance. Tax information for an individual property is shown for the current year and three previous years, but the current posted value for the following year (e.g., 2002) is not on the Finance Division's web site until the data are made available by the Department of Assessments. It is usually the latter information that is the stimulus for queries by taxpayers. Namely, they may have recently received their valuation notice for the next year and want to know more about the basis for the change in assessed value.

In contrast, the DDES web site has a user-friendly "property research" function that can easily be used to find a property and parcel number on a map or by searching by street address. In addition to environmental and other zoning data, DDES provides summary information that it obtains from the Assessor's Office on assessed values and other individual property characteristics. By entering a street address or viewing a map, one can research the parcel numbers, values, and property characteristics of any property in King County. This information is not available on the Assessor's web site.

If a taxpayer accesses the DDES web site to obtain the parcel number(s), he/she would then have to return to the Finance Division's web site to locate the amount of taxes on each property.

Neither of the two sites provides estimated values or taxes for the ensuing year. While Finance Division provides links to the Department of Assessment's web site, it does not link to DDES. As a result, a taxpayer using the internet to gather parcel assessment and tax information would have to be resourceful and persistent, and probably would not know of the existence of all these resources unless someone told them. Further, the information would be up to date only through the current year, although valuation and tax estimates for the ensuing year might have been mailed to the taxpayer.

While we suggest that more information be available on the web sites, we do not recommend that it be unlimited. For example, we do not see the need to include the names of property owners, due to concerns expressed by county agencies regarding the potential for abuse of such information.

Agency personnel tell us that the three county agencies are working together on changes that would improve the content and linking of their web sites.

RECOMMENDATION

- 3-2** We recommend that the three departments collaborate to improve public access and interface to assessment and property information. Information available on assessed values and taxes should be kept as current as possible.
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4 IMPLEMENTATION OF LOCAL BOARD APPEAL ORDERS

Overview

As noted in the first part of this report, property owners annually receive revaluation notices and tax statements for the ensuing year. The revaluation notice explains the new assessed values of both the land and the structure (if applicable) on the property. In King County, property owners may appeal their property's new assessed value by filing a petition to appeal the assessment. The appeals are filed with the county's Board of Appeals and Equalization (BAE or the Board), and the law provides an option for further appeals to the State Board of Tax Appeals after the county board issues an order.

The county council expressed concerns in the timeliness and appropriateness of subsequent valuations with which orders by the BAE to adjust assessed values are implemented into the assessment and tax systems.

We found that the Department of Assessments (DOA) properly implemented the BAE orders by generally using the adjusted assessed values as the starting value for calculating the subsequent year's updated values.

In examining these implementation issues, the audit team looked at a sample of appeals petitions filed initially in 1997, and followed them through the process of adjudication and adjustment. If the county Board decided or "ordered" a lowering of an assessed value, we followed that action through the processing of a tax refund.

In addition, as a result of the BAE orders that adjusted the assessed values, the real property taxes due for the applicable tax roll are adjusted by the Finance Division. The division issues a reduced tax statement if the taxes have not been fully paid. If current taxes have been paid, the property owner may apply to the county for a tax refund.

We found that there were delays in recording Board-adjusted assessed values into the Assessor's Office mainframe computer system. Thus, the process of adjusting the taxes due was also delayed. In our sample, about half of the cases took over 30 calendar days to record the Board's changes to assessed values in Assessor's system. We recommend that the Assessor's Office take steps to reduce the number of days it takes to record BAE orders, which should also facilitate early adjustment of taxes due.

There were also delays in the processing of tax refunds. It took more than 40 calendar days for the Finance Division to process 75 percent of the tax refund applications in our sample for 2000. We recommend the division establish a performance target to reduce the turnaround time for tax refunds.

The Appeal Process

The King County Board of Appeals and Equalization (BAE) is an independent citizens' board created to hear appeals of property owners on the Assessor's determination of assessed values, which are the bases of property taxes. State law requires the value determined by the Assessor's Office be presumed correct in the absence of clear, cogent, and convincing evidence to the contrary.¹⁹ The Board has the authority to raise, lower, or sustain the Assessor's determination.

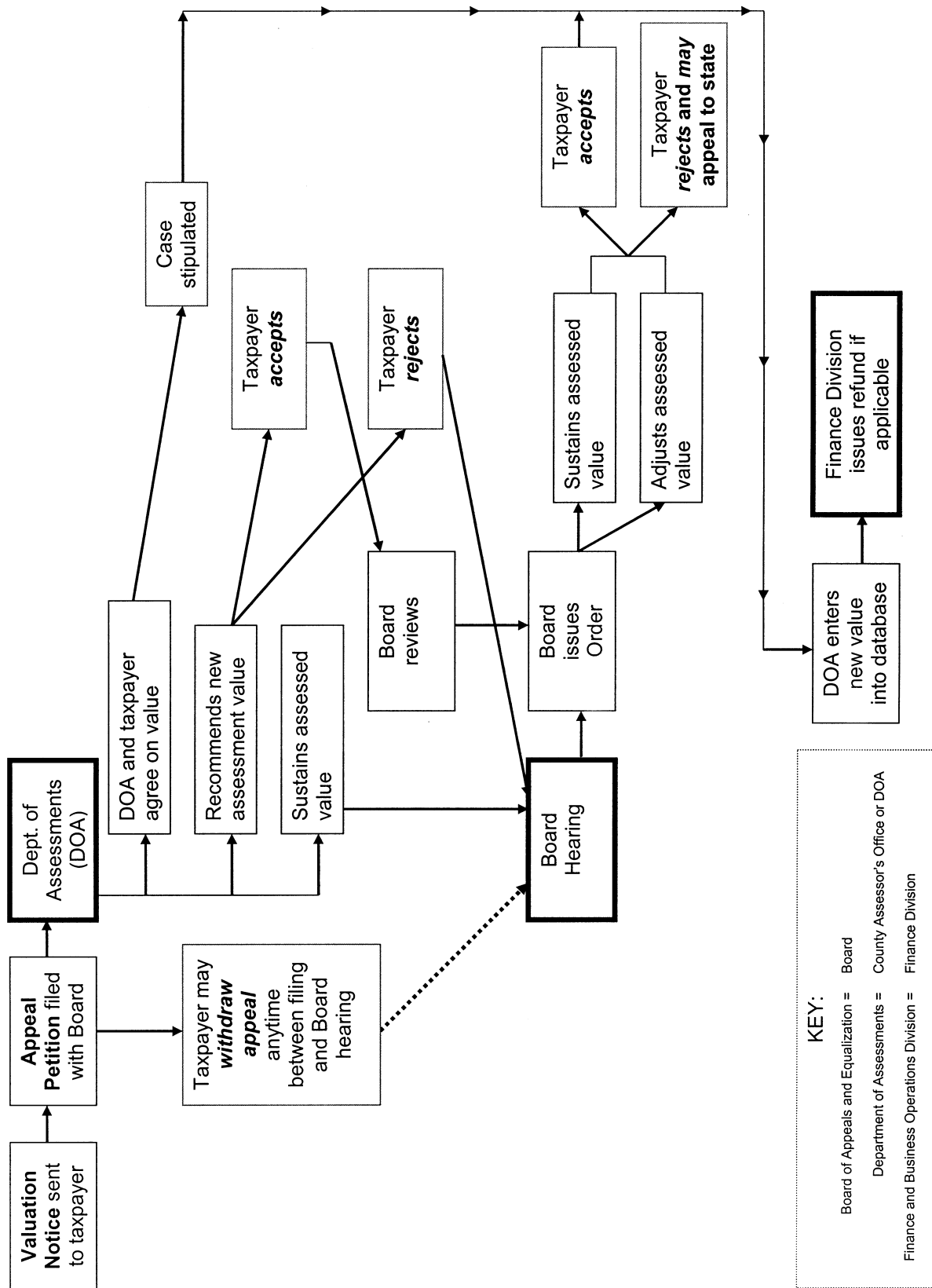
¹⁹ WAC 458-14-046 (4)

The Department of Assessments annually sends official property value notices to property owners. The valuation notices indicate the assessed values of the land and improvements for the current and preceding assessment years. The assessed values for the current assessment year are the bases for property taxes for the ensuing year. For example, the new assessed values for 2001 assessment year will be the basis for the taxes payable in 2002. Property owners may appeal the assessed values determined by the Assessor by filing a petition with the Board before July 1st of the assessment year or within 60 calendar days after the date of the valuation notice, whichever is the later date.

A diagram of the appeals process is shown in Exhibit B on the next page, and it is described thereafter.

EXHIBIT B

Residential Property Assessment Appeals Process



Source: Auditor's Office based on information from Dept. of Assessments, Board of Appeals and Equalization, and Finance and Business Operations Division.

The Assessor's Office/Department of Assessments (DOA) receives a copy of the property owner's petition filed with the Board of Appeals and Equalization (Board or BAE). The DOA reviews the petition including data supporting its valuation and sends a response to the property owner. One of the following may occur:

- DOA and the petitioner agree on the estimate of true and fair value of his/her property. The DOA and the property owner stipulate the value (the department and the property owner agree to the new value) and file a "stipulation of value and motion for appeal withdrawal."
- DOA informs the property owner that its determination of assessed value remains unchanged. The property owner may want to proceed with the appeal and, if so, waits for the scheduled BAE hearing. The appeal process continues unless the petitioner files a motion for withdrawal.
- DOA recommends to BAE a new assessed value of the property. If the property owner agrees with the new valuation, he or she requests the BAE to adjust the assessed value of the property as recommended by DOA. The BAE issues an order adopting DOA's recommended values. If the property owner disagrees, the appeal continues and a hearing is held.

If the appeal petition process proceeds, the Board considers all testimony and evidence presented in the hearings and subsequently issues its order. The Board's order may adjust the value of the property, sustain the assessed value determined by DOA, or accept DOA's recommended new assessed valuation of the property.

The property owner may subsequently appeal the county board's decision to the Washington State Board of Tax Appeals.

As shown on Exhibit C below, the number of appeals for the assessed valuation of residential properties filed with the BAE ranges from 1,460 to 5,760, or an average of 3,480 petitions, from 1995 through 2001. The number of petitions filed with the BAE represents less than 1 percent (.0076) of the total residential parcels in King County. During the period, the results of the BAE decisions were:

- Sustained Assessor's original valuation 49%
- Sustained Assessor's new recommendation 27%
- Revised Assessor's valuation 24%

EXHIBIT C
Appeal Summary for Local Board – Residential Property
From 1995 Through 2001 Tax Years

	1995	1996	1997	1998	1999	2000	2001*
Appeals Filed	5759	1463	3621	3714	3170	3195	3470
Stipulations**	0	0	2	421	597	598	496
Withdrawn	774	248	972	620	367	316	340
Remaining Petitions	4985	1215	2647	2673	2206	2281	2634
Order Issued	4984	1215	2640	2592	2198	2271	1787
Left to Decide	1	0	7	81	8	10	847
Results to Date:							
Sustained Assessor's Original Valuation	51%	51%	48%	50%	44%	52%	44%
Sustained Assessor's New Recommendation	22%	30%	29%	23%	30%	26%	30%
Revised Assessor's Valuation	27%	19%	23%	27%	24%	22%	27%
Total Value Appealed (millions)	1244.4	311.2	637.2	678.7	747.5	829.0	740.6
Total Value Changed (millions)	82.9	24.2	40.4	36.3	53.2	37.1	46.3
Percentage of Change	6.7%	7.8%	6.3%	5.4%	7.1%	4.5%	6.2%

*Partial year, as of September 23, 2001

**In 1995 to 1997, stipulations were not tracked separately but included in the number of withdrawals.

Source: Department of Assessments Appeal Summary for Local Board as of September 23, 2001.

**County Council
Concerns**

The Metropolitan King County Council has expressed an interest in knowing whether the assessed values as adjusted by the BAE were generally used in the annual revaluation of real property assessed values for the subsequent assessment year.

FINDING 4-1**THE ASSESSOR'S OFFICE/DEPARTMENT OF
ASSESSMENTS PROPERLY IMPLEMENTED THE BOARD OF
APPEALS AND EQUALIZATION ORDERS BY USING THE
ADJUSTED VALUE AS THE STARTING VALUE FOR
CALCULATING THE SUBSEQUENT YEAR'S ASSESSED
VALUATION.**

When the Board of Appeals and Equalization issues an order that adjusts a property's assessed value, the Assessor's Office enters the adjusted value into its mainframe computer system. If the changes to the assessed values apply to the current tax roll, the property taxes currently due are appropriately adjusted as well.

If the taxes were already paid, the Finance Division initiates the process for tax refund. When changes to the assessed values apply to previous assessment years, the Assessor's Office initiates the tax refund process, and the Finance Division prepares and issues the tax refund checks to property owners.

The audit team selected a random sample of BAE orders issued in 1997 and 2000 that adjusted the assessed values of the petitioners' residential properties. We traced the entries of adjusted assessed values into the Assessor's mainframe computer system to determine whether entries were properly made. We did not, however, evaluate whether Board decisions were appropriate, only how they were subsequently implemented.

In general we found that the Assessor's Office derived the subsequent assessment year's values by applying the valuation models for the areas where properties are located and by using the adjusted assessed values when applicable. In some cases, the Board-adjusted values are not used as the starting values when calculating the subsequent assessment values. Examples are when residential real properties undergo physical inspections, when some residential characteristics have changed since the last appeal hearing, and when adjustments are ordered late in the annual assessment cycle.²⁰

The adjusted assessed values ordered by the BAE (or the state Board of Tax Appeals) which affect the current tax roll value will be used as the starting value for calculation of the next year's tax roll value when all of the conditions below are met.²¹

- The revalue for the next year's tax roll for the area or the type of property was accomplished by an annual update process in which the current tax roll value was adjusted.
 - The next year's assessed value has not been appealed.
 - There have been no changes to the property or value due to new construction, destroyed property or tax roll corrections.
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²⁰ As noted previously in this report, when a neighborhood undergoes a physical inspection, new values are determined primarily by property characteristics and sale prices. Also, adjustments may occur too late in the annual assessment cycle to be reflected in the next year's valuation notice.

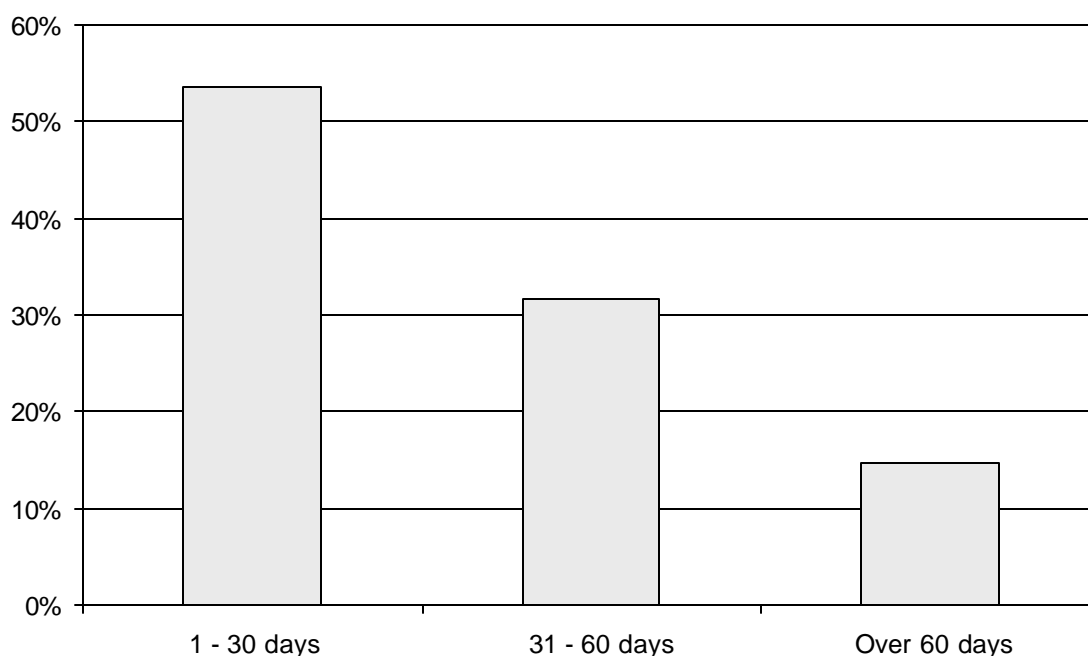
²¹ DOA Policy for Extension of Board Ordered Value Changes to Next Year's Tax Roll.

FINDING 4-2**THE ASSESSOR'S OFFICE/DEPARTMENT OF ASSESSMENTS ENCOUNTERED DELAYS IN RECORDING INTO ITS COMPUTER SYSTEM THE BOARD OF APPEALS AND EQUALIZATION ADJUSTMENTS TO ASSESSED VALUES.**

When the Board issues orders, the copies of the orders are sent to property owners and the Assessor's Office. We found that staff of the Assessor's Office and Board staff are entering the adjusted property values into two separate computer systems. The Board transmits its data on a weekly basis to the Assessor's Office. Because there is no protocol to upload the Board's data into the Assessor's mainframe database, department staff must re-enter the same data. This apparent duplication may contribute to the time it takes the Assessor's Office to process Board orders.

Exhibit D on the next page shows that it took longer than 30 calendar days for the department to process about half of the Board's orders. In many cases it took the Assessor's Office longer than 60 days to input the BAE-adjusted assessed value into its mainframe computer system from the date the BAE orders were issued. In our sample of BAE orders that resulted in the adjustment of values, the department recorded half of the changes within 1 to 30 calendar days. About 30 percent took 31 to 60 days, and another 15 percent of the cases took over 60 days to process.

EXHIBIT D
Processing Time for Board Order in Sample (Years 1997 & 2000)



Note: DOA has no current standard. These are auditors' selected increments of time period.

Source: BAE Orders and DOA Real Property Records

According to the Assessor's Office, the time lag in entering adjustments to assessed values into the department's mainframe system is due to lack of staff and the level of priority assigned to the task. Furthermore, the department closes its mainframe system for any entries from November through January when the new property assessment values are finalized and certified for the following year's assessment roll.

The delay in recording the changes to the assessed values of property on the Assessor's mainframe causes a delay in adjusting the amount of real property taxes due and delay in the processing of tax refunds due to the taxpayer. Furthermore, some believe that the delay in recording the adjusted assessed values may induce more repeat filing of petitions to appeal the Assessor's subsequent assessment.

The Assessor's Office has indicated it is aware of the duplication of data entry tasks and the delays that it causes. Staff have told us that there is a plan to gradually automate the process that will interface information between the Board and the department's mainframe computer system.

The audit staff are not aware of an industry standard for such transactions. However, a useful management tool for the Assessor's Office would be to establish a performance target for the computer inputting of changes in assessed values ordered by the Board of Appeals and Equalization. It would also provide a basis by which the Assessor's Office can evaluate whether it is making progress in reducing the time taken to update Board adjustments.

For example, the department might establish a goal of inputting changes in values within 30 or 60 days of an order issued by the Board and develop strategies to achieve this objective. Thus, the property taxes would be adjusted more timely, consistent with one of the guiding principles set by the Assessor for his office.²²

RECOMMENDATION

- 4-2** The Assessor's Office should streamline its process for inputting Board-adjusted property values into its computer system. It should develop a performance target to reduce the turnaround time for this task and report to the Auditor in September 2002 its progress in meeting that goal.
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²² See Annual Report for 2000.

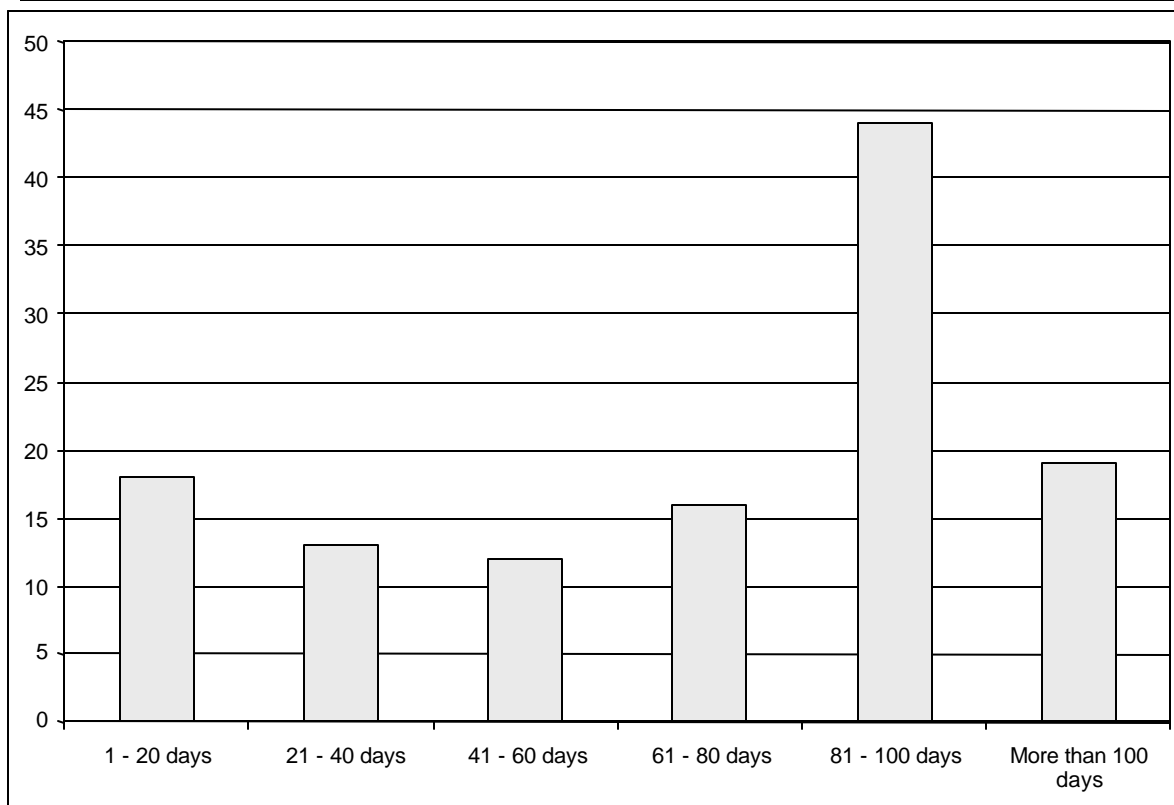
FINDING 4-3**IN MANY CASES, IT TOOK THE FINANCE DIVISION SEVERAL WEEKS TO PROCESS AND ISSUE TAX REFUND CHECKS TO PROPERTY OWNERS.**

The Board's adjustment of a real property assessed value usually prompts a tax refund. If the changes to the assessed values are entered into the Assessor's Office real property mainframe system and applied to the current tax roll, the property taxes are automatically adjusted. The Finance Division then issues to property owners tax statements showing the adjusted real property taxes due.

If the property taxes were fully paid, the Finance Division initiates the tax refund process and issues tax refund checks to property owners. If the changes to the assessed values affect the prior year's tax rolls, the Assessor's Office initiates the tax refund process. The applications for tax refund are sent to the property owners for their signatures and are mailed back to the Assessor's Office. The applications are processed and sent to the Finance Division for payment.

Exhibit E shows the number of days it took to process tax refunds in our sample.

EXHIBIT E
Days From Receipt of Application to Payment of Tax Refunds in Sample
(Year 2000)



Note: The Finance Division has no existing standard. These increments were selected by the audit staff for illustration.

Source: DOA Application for Tax Refund Log and Finance Division Payment Log Records

The audit staff noted that 75 percent of the tax applications for refunds took more than 40 days for the Finance Division to process and issue payments. In many cases, it took about three to four months to process and issue tax refunds to property owners. The law obligates the county to include the payment of interest in the refund of tax payments.²³ It was noted, however, that at the time our review, the Finance Division had processed and paid all taxpayers' tax refund requests resulting from adjustment of assessed values as ordered by the BAE.

²³ RCW 84.69.100 requires the payment of interest on refunds.

Finance Division personnel added that most of the delays we observed occurred due to the death of a key staff person, which caused a temporary backlog. We were told that now most refunds are processed the next day, except during peak workload periods. Finance Division also processes many other types of refunds, such as mispayments.

Furthermore, we noted that there were some tax refunds that were not claimed by property owners. Applications for tax refund forms were mailed for property owner signatures. Some of the applications for tax refunds were not returned to the Assessor's Office for processing. The Assessor's Office did not send second notices to property owners to improve the chance for collecting the tax refunds from the county, nor is there a legal requirement that the office do so. Hence, the tax refunds remained unclaimed. As of November 30, 2001, there were 41 and 46 applications for tax refund with the total amount of \$85,000 and \$139,000 that remained unclaimed in 2000 and 2001 respectively.

The audit staff are not aware of an industry standard for refund transactions. However, the development of a performance target whose purpose is to process tax refunds in a more timely manner could focus the Finance Division's efforts to process refunds faster to property owners. Moreover, we suspect that fewer refunds will lie unclaimed if the Assessor's Office were to issue a second notice of refund to property owners to whom a refund is due.

RECOMMENDATIONS

- 4-3-1** The Finance Division should develop a performance measure establishing a reasonable time period, such as number of days, for processing applications for tax refunds and for issuing payments to property owners. The Finance Division should report to the Auditor in September 2002 its progress in meeting that goal.
- 4-3-2** The Department of Assessments should consider sending second notices to property owners to improve their chance to collect unclaimed tax refunds from the county.
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APPENDICES

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APPENDIX 1

THE MASS APPRAISAL PROCESS

As explained in the main sections of this report, county assessors use a technique called mass appraisal to revalue property assessments on a large scale. Mass appraisal techniques, if properly applied, can be used to ensure that the assessments are equitable, uniform, and reflective of true and fair market value.

Limitations

The mass appraisal process, as developed and standardized by the IAAO and as described in the audit, is one which relies heavily on statistical tests to ensure the reliability of the performance of the assessor's valuation (regression) models and their calibration. These statistical tools are the "scientific" part of the "art" of appraising, but they are not absolutely accurate for every individual property in a given area. Nor are they intended to be. A 95 percent confidence level in the derivation of assessed values indicates that there is room for the possibility that some properties may not fit the model as well as almost all the others within it.

Although the goal of the mass appraisal process is to provide a true and fair value for residential property, achieving perfect equity between assessed values and sale prices for all properties is neither likely nor realistic. Also, other indicators of model performance, such as the assessed value ratio, the coefficient of dispersion, and the price-related differential (see below) meet IAAO standards.

A. Sources

The International Association of Assessing Officers is a professional association which sets standards and conducts professional education and training of assessors. It publishes textbooks, professional assessment standards, and other publications which describe in detail the mass appraisal process. The principal sources of information used in this report were:

Joseph K. Eckert (ed.), *Property Appraisal and Assessment Administration*, The International Association of Assessing Officers, 1990.

Robert J. Gloudemans, *Mass Appraisal of Real Property*, The International Association of Assessing Officers, 1999.

Standard on Ratio Studies, The International Association of Assessing Officers, 1999.

These publications lay out in detail how to conduct mass appraisals and which regression models, statistical formulas, and standards to employ. They also contain information on how to assess the performance of these models and formulas.

B. Statistical Measures and Tests

For this study, we have focused almost exclusively on the performance factors. We did not evaluate the models used by the Department of Assessment's assessors to derive new annual revaluations. However, the models and statistical tests appear to address the key performance

APPENDIX 1 (Continued)

questions and concerns. For example, does the assessor's model/method ensure all properties are assessed equitably and fairly?

We have concentrated primarily on reviewing the **results** of those methodologies, and testing whether they conform to industry standards, i.e., those promulgated by the IAAO.

As noted in this report, IAAO bases the effectiveness of mass appraisal techniques on whether the new assessed values are reflective of market price, are uniform, and are reliable.

The principal test for equity is the level of assessment, expressed as a ratio. This **assessed value (AV) ratio** is the relationship between the assessed value and sales price for all properties within a neighborhood or area. Ideally this number should be 1.0, indicating a perfect relationship between the two values. The IAAO recommends that both the mean (average) and the median AV ratios be calculated. The department also calculates a weighted mean ratio, which is a better reflection of the sample than the arithmetic mean.

An AV ratio that is close to 1.0 does not necessarily mean that the properties in an area were assessed uniformly and reliably. The IAAO suggests some additional statistical tests to ensure that the assessed values derived from calculations have both vertical and horizontal uniformity. In other words, are properties of differing values assessed uniformly (vertical uniformity), and are they assessed as comparable properties in other areas (horizontal uniformity).

The **coefficient of dispersion (COD)** measures uniformity (or variability) of the assessed values. It is the average percentage deviation of the ratios from the mean ratio.²⁴ A low COD indicates appraisals in an area are uniform; a high COD that they are inconsistent. The COD should be 15.0 or less, or 10.0 or less for newer and fairly homogeneous areas.²⁵

The **coefficient of variation (COV)** is another measure of appraisal uniformity, and it is the standard deviation expressed as a percentage of the mean.²⁶ It shows the relative dispersion of an area's assessed values. While there is no IAAO standard for COV, it can provide the assessor with information about the uniformity of values produced by the assessment model.

The **price-related differential (PRD)** indicates whether properties are appraised appropriately relative to their value (vertical equity). In other words, it reveals whether properties of different values are properly (equitably) appraised, irrespective of their value. "Appraisals are considered regressive if high-value properties are underappraised relative to low-value properties and *progressive* if high-value properties are relatively overappraised."²⁷ PRD measures regressivity or progressivity. The PRD is the mean divided by the weighted mean.

Confidence levels can be used to show the range of acceptable AV ratios (mean and median). Ordinarily, a 95 percent confidence level is needed to validate that appraisal values meet standards, and is recommended by the IAAO.²⁸

²⁴ Standard on Ratio Studies, International Association of Assessing Officers, July 1999, p. 24.

²⁵ Ibid., pp. 24 and 34.

²⁶ Ibid., p. 38, and Eckert, op. cit., p. 539.

²⁷ Eckert, p. 539.

²⁸ Ibid., p. 171 and p. 608.

APPENDIX 1 (Continued)

Binomial tests show whether the assessed values and ratios are normally distributed. If they are not, then other statistical tests may be needed to validate uniformity of assessed values in an area.²⁹ If these statistical tests meet standards and the data are normally distributed, further testing for equity and uniformity is not necessary, according to the IAAO.³⁰

Non-parametric statistical tests can also be used to determine whether there is equity between property areas. For comparing two areas only, the **Mann-Whitney test** is used. For comparing three or more areas to see if they are appraised at equal percentages of market value, one may use the **Kruskal-Wallis test**.³¹ The Department of Assessments does not utilize non-parametric tests as long as the parametric tests meet standards.

C. Technique Used to Verify Statistics

The audit team used a sampling technique and an array of statistical calculations to verify work performed by Department of Assessment staff.

We reviewed a random sample of ten area reports: five annual update areas and five physical inspection areas. (The difference between an annual update and a physical inspection is described in Chapter 2 of this report.) They were:

<u>Physical Inspection Areas</u>	<u>Annual Update Areas</u>
Woodinville/Paradise Lake	North Sammamish
Inglewood/Juanita	Central Shoreline
Newport/Kennydale	Eastgate/Factoria
Woodmont/Redondo	Auburn
Central Area	Queen Anne

We verified the following statistical measures for Auburn, the Central Area, Woodinville, Eastgate, and Queen Anne:

- Sample size
- Mean assessed value
- Mean sales price
- Standard deviation for assessed value
- Standard deviation for sales price
- Arithmetic mean AV ratio
- Median AV ratio
- Coefficient of dispersion
- Coefficient of variation
- Price related differential
- Upper and lower median limits at the 95% confidence level
- Binomial test.

²⁹ Ibid., pp. 536-538, and 617-620.

³⁰ Ibid., pp. 596-597.

³¹ Ibid., pp. 592-596.

APPENDIX 1 (Continued)

D. Results of Statistical Verification Tests

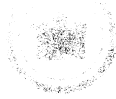
In all cases, the numbers we computed equaled those reported in the five Department of Assessment area reports noted above.

In addition we conducted non-parametric tests on three areas, Queen Anne, Auburn, and Eastgate and verified that there was horizontal equity between these areas.³²

³² Kruskal-Wallis test was used.

APPENDIX 2

EXECUTIVE RESPONSE



King County Executive
RON SIMS

RECEIVED

MAR 01 2002

KING COUNTY AUDITOR

February 28, 2002

Cheryle Broom
King County Auditor
Room 1020
COURTHOUSE

Dear Ms. Broom:

Thank you for the draft report titled Audit of Residential Assessments, Department of Assessments in which you address certain functions performed by the Department of Finance¹. Our responses to the findings discussed in your report are as follow:

FINDING 3-2 - Chapter 3, Page 19 Relating to the Treasury Section Web Site.

We generally agree with the finding as it relates to the Treasury web site not having a parcel search feature or a link to DDES. The purpose of the Treasury web site is to provide taxpayers with general information and account specific information about their property taxes including the assessed value and payment information for the current and past three years. The account specific information is the same **real time** information that Treasury staff obtains when they make an inquiry.

In developing the web site, managers decided to leave out a feature to search for property tax account number by name or address because of recent experience with groups using the property tax system to acquire and publish the names and addresses of public officials and employees on the internet and then using that information to harass those officials and employees.

At the time the web site was developed, managers decided to not provide a link to the DDES site because the DDES site does not provide **real time** information and managers believed taxpayers would be confused by information on the DDES web site that may not be accurate. Because DDES uses only periodic downloads from the property tax system, changes in assessments and owners since the last download are not reflected in their information thus creating problems when taxpayers see different information on two county sites. In addition, there are security issues that must be addressed with Information and Telecommunications Service (ITS) before that link can be established.

¹ We wish to note that the Department of Finance is now designated as the Finance and Business Operations Division of the Department of Executive Services, as approved by the King County Council.

KING COUNTY COURTHOUSE 516 THIRD AVENUE, ROOM 400 SEATTLE, WA 98104-3271
(206) 296-4040 296-0194 FAX 296-0200 TDD E-mail: ron.sims@metrokc.gov

 King County is an Equal Opportunity/Affirmative Action Employer and complies with the Americans with Disabilities Act 

APPENDIX 2 (Continued)

Cheryle Broom
February 28, 2002
Page 2

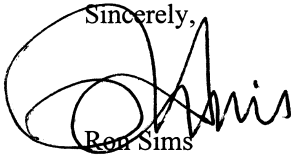
Treasury Operations staff will work with ITS and the Department of Assessment to develop a link that will provide a parcel search as well as provide correct real time information.

FINDING 4-3- Chapter 4 Page 34 Relating to the Delay in Issuing Refunds.

We generally agree with the finding as it relates to the processing of refunds during 2000. However, a significant contributing factor for the refunding delay in 2000 was the untimely death of the Treasury Operations staff member that processed petition refunds. In December 1999, the staff member who was responsible for the petition refund processing took vacation. Before returning to work she became ill and, in early January 2000, died away unexpectedly. We were unable to accomplish hiring to fill the position until April 2000. Since hiring the replacement employee, our processing of refunds has returned to a normal cycle.

OTHER COMMENTS

We will review performance measures for the petition refund position in 2002, including not only Board of Equalization petitions but all petition refunds that are processed. Staff that process petition refunds also processes refunds for payments on incorrect accounts, refunds due to assessor's corrections in square footage, miss-spotted improvements, refunds to senior citizens eligible for the property tax exemption program in the past three years and pro-rated refunds due to the sale of property to a government entity. Of the 2,916 petition-refunds processed in 2001 only about 24 percent (about 700) were Board of Equalization/Board of Tax Appeals related.

Sincerely,

Ron Sims
King County Executive

cc: The Honorable Scott Noble, Assessor, Department of Assessments
Paul Tanaka, County Administrative Officer, Department of Executive Services (DES)
Bob Cowan, Manager, Finance and Business Operation Division, DES
Dave Lawson, Internal Audit Manager, Office of Budget

APPENDIX 3

ASSESSOR RESPONSE



King County
Department of Assessments
King County Administration Bldg.
500 Fourth Avenue, Room 708
Seattle, WA 98104-2384

(206) 296-5195 FAX (206) 296-0595
Email: assessor.info@metrokc.gov
www.metrokc.gov/assessor/


Scott Noble
Assessor

RECEIVED

FEB 14 2002

KING COUNTY AUDITOR

MEMORANDUM

Date: February 12, 2002
To: Cheryle A. Broom
From: Scott Noble, Assessor 
Subject: Preliminary Draft – Audit of Residential Assessments

I have read and reviewed the draft report of the performance audit of residential property assessments in King County performed by your audit group.

The primary purpose of the audit was to evaluate the Department of Assessments residential valuation process for compliance with industry standards and production of assessments that reflect true and fair market value. This is also the primary mission of our Department. Finding the King County Department of Assessments meets or exceeds statewide and industry standards for mass appraisal with high measures of uniformity and assessment levels is clearly a validation of our process and important to all taxpayers in King County.

The audit verified the Department is properly implementing Board of Equalization orders. The recommendation to streamline the data entry process for Board adjusted values is good advice and already implemented.

In the meantime, providing assessment information to taxpayers remains a challenging issue. We continue to work with other agencies to make our information accessible and understandable.

I sincerely appreciate the thoroughness and technical abilities of your audit team. The annual valuation of King County's 460,000 residential properties is a complex and detailed process. The success of the Department is due to our hard-working professional staff.

SN:swr

cc: Lynn Gering, Chief Appraiser
Debra Prins, Residential Division Manager

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REPORTS BY THE KING COUNTY AUDITOR'S OFFICE

1985 - 1993

- 1985** Alcoholism and Substance Abuse Services Division
Receivables (F)
Test of Real Property Tax Systems Computer Files (F)
Budgetary Staffing Standards (M)
Police Overtime Usage and District Court Scheduling (S)
Roads CIP Budgeting and Staffing Practices Follow -Up (M)
Insurance Fund (F)
King County International Airport (F)
Equipment Management/Utilization, Maintenance, &
Replacement Practices (M)
- 1986** Business License Inspection Practices (M)
County Gasoline Contract (M)
Parks Maintenance (M)
Collective Bargaining Agreements (M)
Finance Office Cashiering (M)
Risk Management (M)
H&CD Housing Loans Administration (F)
Public Defense Program Fund Balance Levels (F)
King County Reporting of State Excise Tax (F)
Department of Public Safety, Financial and Personnel
Administration (S)
- 1987** Harborview Medical Center Master Plan and CIP (M)
Jail Intake, Transfer, and Releases (M)
County Airport Historical Funding (F)
County Airport Operations (M)
Motor Pool Financing (S)
Meat Inspection Program (M)
- 1988** Accounts Payable (F)
Public Health Pooling Fund (S)
DPH Financing Provisions of 1984 Interlocal Agreement (S)
District Courts Time-Pay Collections Clerks (S)
Political Contributions by Charitable Organizations (S)
Surplus Personal Property (F)
Solid Waste Cashiering (F)
Project Management Cost Allocation Procedures (F)
Court Services (M)
Natural Resources and Parks Division Rental Houses (S)
M/WBE Utilization Requirements for Financial Services
Contracts (S)
DPH, County Funded Community-Based Health Clinics
and WIC Program (S)
Court Detail, Operation and Staffing (M)
Jail Classification Services (M)
Restaurant Inspection Program (M)
- 1989** Audit Coverage in King County Government (S)
Real Property Records (M)
Solid Waste Accounts Receivable (F)
Department of Public Health Car Rental (S)
Records Management (S)
Department of Public Health, Computer System
Planning and Development (S)
Performa '87 (F)
Parks Capital Improvement Program (M)
1988 Consultant Selection Processes for Harborview
Capital Projects (S)
- 1990** Jail Intake, Transfer and Release -- Workload, Operations
and Staffing (M)
Arbitrage Rebate Requirements on Tax-Exempt Bonds (F)
Conservation Futures (F)
Real Property Sale, Lease & Exchange Practices (M)
Youth Services (M)
Office of Civil Rights & Compliance (M)
Criminal Investigations & Special Operations (M)
Business and Occupation and Public Utility Taxes (F)
Earthquake Preparedness (M)
District Courts and Warrants Division Revenues (S)
State Auditor Use of County Facilities and Equipment (S)
Department of Youth Services Health Program (M)
Code Enforcement Program Building and Land
Development Division (M)
Assigned Take Home Vehicles and Agency-Paid Parking (S)
- 1991** Carpentry Shop (F)
County Fuel Station Internal Controls (F)
County Agency Performance Monitoring Survey (S)
King County Elections Practices (M)
King County Purchasing Agency (M)
Farmlands and Open Space Preservation Program (M)
King County Detoxification Center (M)
Dept. of Public Safety Field Training Officer Program (S)
- 1992** King County Office of Emergency Management (S)
King County Dept. of Stadium Administration Revenues (F)
Environmental Health Charges to Solid Waste (S)
Sierra PERMITS Automation System (M)
King County Office of Human Resource Management (M)
BALD Financial Guarantee Administration (M)
Northshore Youth and Family Services (F)
Dept. of Youth Services Drug & Alcohol Program (M)
Dept. Adult Detention & Youth Services Overtime (S)
SEPA Revenues and Accounts Receivable (F)
Methodology for Funding Legal Services for Non-Current
Expense Fund Agencies (S)
Accounts Payable (F)
Solid Waste Equipment Replacement Practices (M)
- 1993** Dept. of Development and Environmental Services Assigned
Vehicles (M)
Certificate of Occupancy Process (M)
Collection of Civil Penalties and Recovery of Abatement
Costs (F)
DDES Field Inspection Function (M)
Police Overtime for Court Appearances (M)
Dept. of Youth Services Sex Offender Unit and Special Sex
Offender Dispositional Alternative Program (M)
Office of Open Space Financial Administration (M/F)
Collection Enforcement Section (S)
Cellular Phones (S)
Surface Water Management Service Charges (F)
Acceptance of Special Waste at County Landfills (S)
Solid Waste Division Internal Controls for Handling and
Storage of Parts, Fuel, and Other Operating Supplies (F)

REPORTS BY THE KING COUNTY AUDITOR'S OFFICE

1994 - PRESENT

- 1994** Span of Control (S)
Community Diversion Program (M)
Dept. of Development & Environmental Services Reduction-In-Force Process (S)
Cedar Hills Alcohol Treatment Facility (CHAT) Accounting Procedures and Staffing Levels (M)
DDES Fire Marshal's Office Fire Investigation Unit (S)
DDES Accounts Receivable (F)
Travel Expenses and Credit Card Use (M/F)
Services & Treatment Alternatives for Developmentally Disabled Offenders Incarcerated in the King County Correctional Facility (M)
Board of Appeals and Equalization (S)
Surface Water Management Non-Construction CIP Costs (S)
Tracking and Reporting on Lawsuits Involving King County (S)
Jail Overtime Study Follow -Up (S)
- 1995** Dept. of Metropolitan Services Temporary Contract Workers (M)
King County Purchasing Practices & Supply Contract Prices (M)
Sewage Facilities Capacity Charge (F)
Audit Recommendation Implementation (S)
Dept. of Metropolitan Services Professional Services Contract (M)
Human Services Dept. Monitoring of Contract Compliance (F)
Biomedical Waste Regulation Enforcement (S)
Customer Service Motion Survey (S)
County Fair Financial & Contract Management (F/M)
Supported Employment Program (M)
- 1996** Dept. of Metropolitan Services West Point & Renton Wastewater Treatment Facilities (C)
1990 Code Enforcement Audit Follow-Up (M)
Dept. of Metropolitan Services Compensatory Time Policies, Procedures, and Practices (S)
King County Women's Program (M)
Cultural Programs (Hotel/Motel Tax Distribution) (F/M)
Investment Management (F)
King County Road Construction Fund and Capital Improvement Program (M)
Emerging Infectious Diseases and Laboratory Operations (M)
DUI Offender Program (M)
King County Real Property Acquisition Practices (M)
Seattle-King County Dept. of Public Health (SKCDPH)
Immunization Program (M)
- 1997** King County Methadone Treatment Programs (M)
Criminal Justice-Funded Department of Public Safety Staffing (S)
Permit Fee Waivers (M)
Animal Control Section Collection Practices and Interlocal Services (F)
King County Contract for Sobering Services (S)
Office of Civil Rights Enforcement Case Management (S)
Neighborhood Drainage Assistance Program (S)
Surface Water Management Program (S)
Motor Pool (S)
Information and Telecommunications Services (M)
- 1998** Automated Telephone Systems (S)
Interlocal Agreements & Public Agency Contracts (S)
Review of Selected Capital Project Funds (S)
Metro Tunnel Rail Installation Process (M)
Road Maintenance Contracts (F)
ITS Infrastructure Operating and Maintenance Costs (F)
- 1999** Information Technology Planning, Development, and Implementation Processes (M)
East Lake Sammamish Trail (S)
Bond Funded Capital Improvement Projects (F)
King County Traffic Volume Forecast Model (S)
Jail Overtime (S)
Transit Management (C)
Disposition of Firearms (S)
Metro Transit Vehicle Maintenance Operations (M)
Employee Benefits (C)
Risk Management (C)
- 2000** Audit Recommendation Implementation (S)
Sheriff's Office Overtime (M)
Office of Human Resources Management Hiring Practices (M)
Columbia Public Interest Policy Institute (M)
King County Permit Processes and Practices (M)
School Impact Fees (S)
Scale Operator Injury Claims (M)
Parks Department Span of Control (S)
- 2001** Take-Home Vehicle Policies and Practices (M)
Vanpool Replacement and Surplus Practices (M)
Pacific Medical Center Interlocal Agreement (S)
Grading Enforcement at Palmer Junction Gravel Pit (P)
Institutional Network (I-Net) Project (F)
Financial Systems Replacement Program (C)
Current Expense Fund Transfers (S)
- 2002** Residential Property Assessments (P)
- (C) Audit/Study conducted by consultants
(F) Financial Audit
(M) Management Audit
(P) Performance Audit
(S) Special Study

**ALTERNATIVE FORMATS AVAILABLE UPON REQUEST, PLEASE CONTACT
206-296-1655 TTY 206-296-1024**